Steel Dragon Tools

SDT-7090I

WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

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Our manufacturing plants have been producing and distributing pipe threading, drain cleaning machines, and core drill tools for over twenty years. Feel comfortable knowing that Steel Dragon Tools are CE approved and government tested to the highest quality standards. We have controlled our quality over the twenty years using the latest technology to build our tools. Our original production plants are in Japan and Taiwan, and now we have manufacturing plants all over the world. We currently distribute products to our distributors in Asia, Europe, Africa, Australia and North America. Our products are known worldwide for dependability reliability and universality.

Steel Dragon Tools distributes a wide range of pipe threading machines, parts, and accessories to many different markets around the world. SDT also manufactures a wide range of Handheld pipe threading kits, pipe chain vices, drain cleaning machines / accessories, core drill rigs and core drill bits.

One Year Warranty Program:

Steel Dragon Tools warrants to the original purchaser, which may include such brand names “Steel Dragon Tools” to be free of manufacturing defects in material and workmanship for a period of 1 YEAR from the date of purchase by such user. The company you purchased this item from will decide at its option, either repair or replace, free of charge; any product found to be defective upon company inspection. Please contact your retailer for any questions or claims process.

I. Introduction

This machine is for threading of various water, electric or gas pipes ranging form 1/2" – 2". It is efficient and can be widely used in equipment installation and construction industries and is an ideal device for increasing efficiency, shortening construction time, securing construction quality, and decreasing working intensity. Read this manual carefully before using the machine.
Caution: The electric threader is for threading. Follow directions and instructions of the Electric Threader User's Manual to avoid danger to operate it.

II. Technical Parameters:

- Range of work is 1/2" inch to 2" inch NPT (National Pipe Thread)
- Automatic Oiling System produces reliable high quality threads. Oil is pumped with a gear driven pump and automatically recirculated through the system.
- Heavy Duty 1500W Universal 115V 2HP series motor with Forward and Reverse.
- Industrial strength 0-2" inch pipe cutter
- 1/2" - 2" inch die head
- Dies are made of Steel with Rockwell Hardness of 58-62 HRC for long life.
- Maximum Chuck Capacity is 2-1/2 inches
- Pentangular 5 Blade Conical Reamer
- Maximum amperage under load is 18.5 amps
- 40 Turns per minute for high quality threads

III. Special Safety Requirements

1. Keep the working site clean and bright (illumination condition 600lux) for disorder and darkness may cause accidents.
2. Don't expose machine to rain or operate in moist workshop to avoid electric shock.
3. Operators are only allowed to wear tight clothing. Operators should take off the gloves, jewelry, watch or likewise and should not loosen his or her long hair without permission.
4. When the threading machine (including its accessories) is installed in the working site, use only the 30mA leakage resistance switch.
5. The following is forbidden when the machine is running:
    - Touching or grabbing the workpieces.
    - Replacing or removing components (pipe accessories, livers, or pipes etc)
    - Cutting or sawing pipes using hand tools.
6. If the dangerous areas in the machine or its workpieces can not be examined closely, the spinning workpieces or the dangerous areas should be protected. The protective devices must be reliably and stably placed. The supporting devices must be stable if they are used. Install three support legs and adjust three screws to ensure height and stability.
7. Keep children away when the machine is running. They are forbidden to operate the machine or drag the cables and wires.
8. Avoid overload operation. The unsuitable accessories, overload operation and blunt or damaged screwing die must not used for fear that the machine would be damaged.
9. Extending too long pipes to operate the machine is forbidden. Keep this machine balanced and stable all the time. Calculate the danger caused by suddenly-broken workpieces (based on the length of the workpieces, the section, the material and the rotational speed) and use enough supports to avoid danger.
10. Maintain this machine with care. Lubricate the machine and replace the accessories according

to the instructions of this manual to make it more safely operated. Check the cables of this machine regularly. If there is any danger, it must be repaired by the technician. Keep various handles clean and tidy all the time. Keep them out of oil pollution.
11. Turn the power off. Pull the attaching plug out when the machine is not in use.
12. Starting the motor carelessly is forbidden. Make sure the switch is at the position of “off” before the plug is connected with the machine.
13. Do not operate the machine when the operator is tired, or if he has touched any drugs.
14. Check the damaged spares: Check any cutting tools and spares carefully before using them, and see if they are in normal working condition and able to function. Any damaged spares must be repaired and replaced by the specially trained technicians.
15. Operation is forbidden when any switch can not be properly turned on or off.
16. Replacing spares and accessories: Use the spares of Tiger King Electric threader for safety and proper operation.

IV. Directions

When Unpacking the case, check if the accessories below are attached:

1. Two sets of screwing dies (4 pieces each set)
2. Three inner hexagon spanners and one screwdriver
3. one set of support stool

Preparations to threading:

Insert the pipe dies

1. Select several sets of screwing die according to the diameter of the pipe.
There are two groups of figures on each screwing die, one of which represents its specification; another representing the assembly sequential numbers (such as 1, 2, 3, 4).
2. Remove the die head from the sledge (Fig.3), loosen the nut of the handle, turn the justify the scratch A-A.

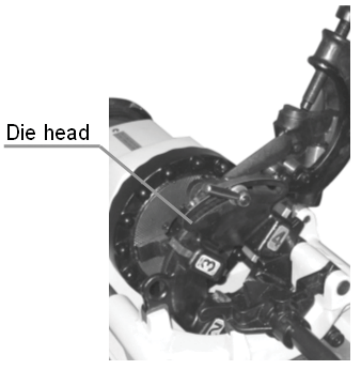

Fig. 3

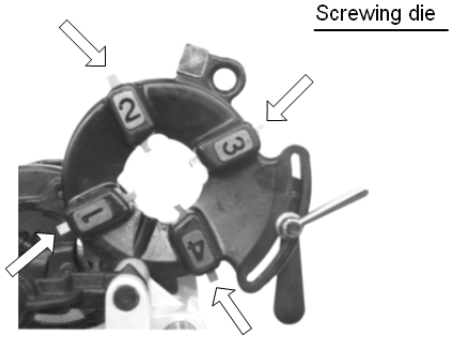

Fig. 4

3. Put the selected screwing dies into die grooves according to their sequential numbers, turn the curved disk, then adjust the scratch of the thread to that of the support disk. Tighten the hand screw, then the screwing die is fixed.(see Fig.4)
4. Place the assembled die heads on the sledge.

Check cutting oil:

1. Check whether there is enough cutting oil in the tank;
2. Add oil when needed through the oil disk;
3. Cutting oil will overflow over the die head after the machine starts;

Note: Use thread cutting oil only to ensure to produce high-quality threads.

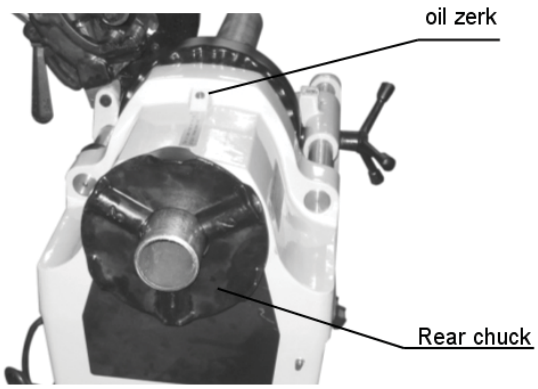

Fig. 5

Threading operation:

Any operation requiring non-rotating condition should be done only when the machine stops running;

1. Rotate the fore and rear chucks clockwise. Then loosen three claws, install the pipe from beside the rear chuck, make it pass through the fore chuck and extend by 100 mm. (see fig.5)
2. Rotate the fore and rear chucks anti-clockwise, clamp the pipe.
3. Pull up the cutting knife rack and beveling rack, push down the screwing die head, turn the carriage handle to let the die head to join the pipe. (see fig.6)

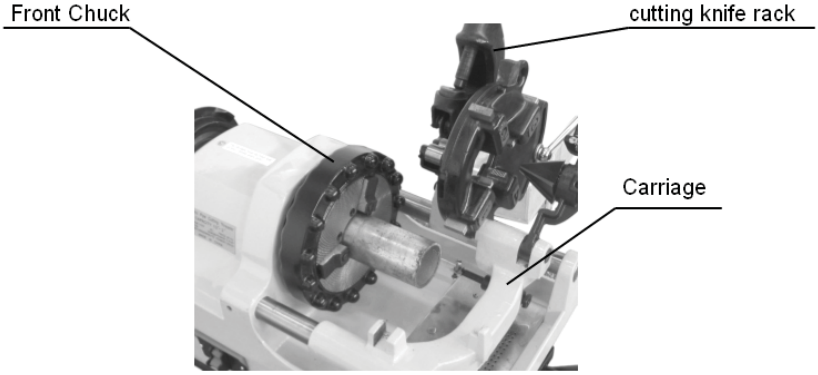

Fig.6

4. Start the motor, chucks should turn around count-clockwise. Rotate the handle of the carriage strongly to make the die head cutting into the pipe, when 2-3 threads are made the operator could loose his hand.
5. When the screw is cut to the required length, i.e. the right face of the pipe is at the same level of the screwing die, push ahead the spanner above the die head to release the screwing die and thread.
6. Stop the machine, withdraw the die head from the right side to the idle position.
7. Loosen the fore and rear chucks clockwise, and remove the pipe from the rear chuck.

Cutting the pipe:

1. Pull up the die head and the beveling device so that the fore and rear chucks fasten the pipe.
2. Push down the cutting knife rack and rotate the handle. Open the rack to let the cutting knife roller straddle on the pipe.
3. Rotate the sledge handle to move the cutting knife to the cutting position (see Fig. 7)

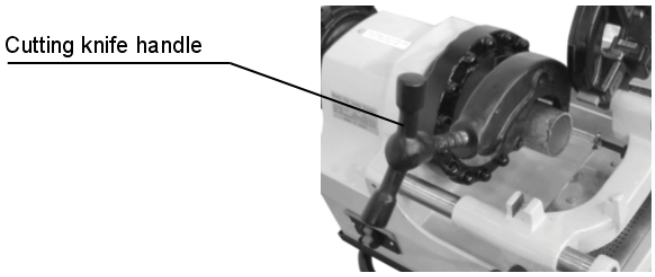

Fig. 7

Rotate the cutting knife handle to move the cutting knife to the pipe.
5. Start the machine. Switch the gear shift hand to the top gear and make the knife cut into the pipe. Cut about 0.15 – 0.25 mm for one turn of the pipe, i.e. for each turn of the basic shaft the cutting knife handle forwards about 1/10 turn. Quit the cutting knife and pull up the rack to its position after cutting. Caution: Cut with moderate speed and force to avoid the distortion of the pipe and the damage of the cutting knife.

Inner diameter beveling:
1. Pull up the screwing die head and cutting knife rack and push down the beveling rack to make the fore and rear chucks fasten the pipe.
2. Start the machine. Rotate the sledge hand wheel and drive the beveling device to the inside of the pipe. (see Fig.8)
3. Stop the machine after the beveling. Move the beveling rack to its position.

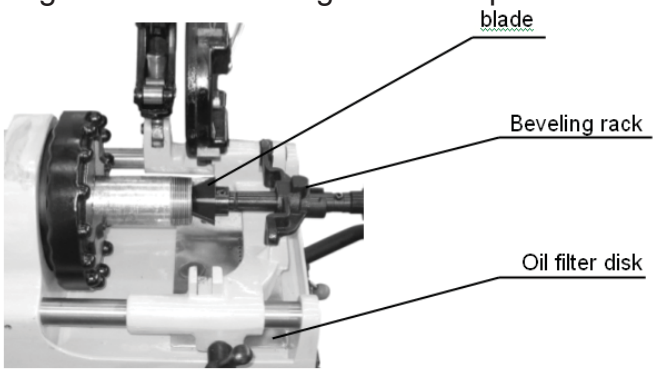

Fig. 8

V. Maintenance:
1. Turn the master switch to the position of “off” or unplug the power when the machine is checked or maintained.
2. The shell of this machine is cast with a whole piece of aluminum alloy. Its reduction gearbox keeps lubricating permanently. Do not impact the shell violently.
3. Cooling oil system: Clean the oil filter disk and oil suction filter disk after running for 8 – 12 hours. Clean the oil tank and refill if the oil is dirty or turns black.
4. Small iron filings may fell into the oil tank when threading. It is therefore essential to clean the filter disk once a week to keep the machine in order.
5. Check the cutting blade each week. Replace it when it is blunt.
6. Check the attrition of the claw points in the claw one a month. If the claw points are worn, replace them (three each set) to ensure to produce the threads of high quality.
7. Clean screwing dies and die heads every shift. Check if the teeth of the screwing die are broken. If they are, remove the cuttings between the teeth. If the die is already broken, replace a set of dies instead of the broken one only.
8. There are two oil cups on the shell of main shaft. Oil at least twice each shift to lubricate the fore and rear bearings.
9. Unplug the power when the machine is not in use. Coat corrosion resistant oil on both fore and rear guideposts and other working surfaces. Store it in a dry and airing place.

Problem	Cause	Remedy
The motor does not run or makes breaking sounds when running.	The fuse is blown.	Replace the fuse.
	A poor power contact	Replace the plug wire.
	The insider of the cable is broken.	Locate the broken point with multimeter.
	Electric capacity is broken down.	Replace the electric capacity.
The pipe can not be fastened or it slips when threading.	Less forceful stroke.	Hammer forcefully.
	The claw point is upside-down.	Adjust the claw point.
	One of claw points is broken or notch-edged.	Replace the claw point.
The cutting knife can not cut.	The point of the cutting knife is worn-out and not sharp.	Replace the blade.
	The pin roll of the cutting knife is worn down.	Replace the pin roll.
	Apply less force when starting to cut.	Cut with force.
The cutting knife does not work when threading.	The knife does not open widely when starting to thread.	Use the knife properly.
	A few teeth of the cutter head are broken.	Replace the knife.
	The type and size of the knife is not suitable.	Reinstall the knife.
	There are iron filings in the grooves.	Clean the screwing die head.
The fore chuck body is loose.	M6 bolts are loose for long-term use.	Check at all times.
The main shaft heats up.	Lack of oil	Oil regularly.
		Remove the beam barrel and scratch the shaft.
The cooling oil can not be sufficiently provided.	The oil circuit is blocked.	Clean the oil circuit.
	The oil hole is not installed properly after the fulcrum shaft of the screwing die head is removed.	Reinstall it.
	The oil in the oil pump has leaked out.	Fill some cooling oil in the oil pump.
The cooling oil leaks into the motor.	The oil seal of the oil pump PD 8 x 22 x 8 has been damaged.	Replace the oil seal.

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